

CITY OF BOULDER, COLORADO
BOARDS AND COMMISSIONS MEETING MINUTES

Name of Board / Commission: Water Resources Advisory Board	
Date of Meeting: 21 July 2014	
Contact Information of Person Preparing Minutes: Kaaren Davis 303.441.3203	
Board Members Present: Vicki Scharnhorst, Dan Johnson, Mark Squillace, Lesley Smith, Ed Clancy Board Members Absent: None	
Staff Present: Jeff Arthur, Director of Public Works for Utilities Bob Harberg, Principal Engineer - Utilities Katie Knapp, Engineering Project Manager Kurt Bauer, Engineering Project Manager Annie Noble, Flood and Greenways Engineering Coordinator Bret Linenfelser, Water Quality and Environmental Services Manager Kaaren Davis, Board Secretary	
Meeting Type: Regular	
Agenda Item 1 – Call to Order	[7:00 p.m.]
Agenda Item 2 – Approval of the 16 June 2014 Meeting Minutes:	
16 June minutes: Motion to approve minutes from June 16th as presented. Moved by: Squillace Seconded by: Johnson Vote: 4:0	
Agenda Item 3 – Public Participation and Comment	
Public Comment:	
<ul style="list-style-type: none"> • Yael Cohen: Condo owners. FEMA insurance was inadequate to deal with flood damage. Want to make sure preventative measures are taken at this time. Show of hands shows approximately 10 residents of the condominium development were wiped out by the flood. • Kathie Joyner: Significant property damage from the floods. Hopes the city can find a way to accomplish one of its goals to remove hundreds of dwellings from the floodplain. There are far reaching financial effects from the flood. Action is critical. Some did not have flood insurance, but those who did know that flood insurance is inadequate. Hopes that productive ways to mitigate future events can be found through cooperation between all of the involved agencies. • Steve Karakitsios: Significant flood damage. Knows that the city has much on its plate. How do the residents track progress and budget expenditures related to the flood mitigation project proposals? How do we hold accountability? How can we see it and track it ourselves? • Jeff McWhirter: President of SE Boulder neighborhood association. We are victims of geography and ourselves. We dodged a bullet last fall, the event was not as bad as it could have been. We have hundreds of homes in the floodplain and that will be expensive to mitigate. Staff has done a good job in the past. Problems are expensive to fix but we really do need to fix them. • Don Prince: Had some flooding but was not too bad. Three things could have reduced flooding. Water going north on 9th had no route to the creek and ended up on Canyon. No ingress to Farmers Ditch. At 17th Farmers Ditch goes under the road and there was a bottle neck there. Believes that Farmer's Ditch needs to be deeper to accommodate flood waters. • Diane Fritz: Goss Grove neighborhood association representative. Here to observe the conversation about mapping the Boulder Slough. Even though most of the discussion is farther downstream, believes Farmer's Ditch was a key factor in their neighborhood flooding. Want to keep abreast of the neighborhood's interest and offer help. 	
Board follow up:	
<ul style="list-style-type: none"> • Board requested details from staff on Osage and Quala and Quayden (South Boulder Creek). • Board and staff provided information on how the public can follow up on projects and budget expenditures and keep themselves informed throughout the flood recovery, reconstruction and 	

mitigation process moving into the future.

Agenda Item 4 –

[7:26 p.m.]

Information Item – Overview of Floodplain Management Program and Floodplain Mapping Studies.

Jeff Arthur and Annie Noble presented the item.

Executive Summary from the Packet Materials:

The purpose of this memorandum is to provide a general summary of the history and progress made to date on the South Boulder Creek flood mitigation planning study. This mitigation plan was initiated in 2010 after the floodplain mapping was updated in 2007. Since the study was initiated, multiple flood mitigation alternatives have been evaluated to address flooding associated with South Boulder Creek. A consultant recommendation has been developed and is described in this memorandum. A more detailed description of the recommended alternative will be presented and a request for a motion from the WRAB will be made at a meeting scheduled on August 18. Attachment A shows the location of the study area.

Hydraulic modeling indicates that a major storm event will cause water from South Boulder Creek to overtop US36 near Table Mesa Drive and result in flooding through the West Valley (area generally located west of South Boulder Creek, north of US36, east of Foothills Parkway and south of Arapahoe Avenue). The September 2013 flood event did overtop US36, causing an estimated \$45 million in flood damage. A flood mitigation planning study began in early 2010 with a focus on developing and evaluating alternatives designed to mitigate flood hazards affecting structures and areas along South Boulder Creek and the West Valley within the current incorporated city limits.

Conceptual alternatives were initially developed by problem area in a matrix format that included a wide range of mitigation measures. These concepts were then presented at a public meeting and subsequently combined into 15 Alternative Plans. These alternatives were evaluated and nine Best Alternative Plans were developed and presented at a second public meeting and to WRAB in late 2010.

Four of the nine Best Alternative Plans were further refined and analyzed and the consultant team selected an engineering recommendation. Major components of the consultant recommended alternative include construction of a regional stormwater detention facility south of US36, a smaller detention facility at Manhattan Middle School and one at Flatirons Golf Course.

The recommended alternative would provide significant flood protection within the West Valley area, including eliminating the 100-year floodplain designation that currently affects approximately 700 structures. The estimated cost of the alternative is approximately \$46 million, but the project could be constructed in three phases. Construction of the project would require numerous permits, agreements with the University of Colorado and Boulder Valley School District, disposal of Open Space and Mountain Park land and would be regulated by the State as a high hazard dam. Construction of the regional detention facility at US36 would result in significant impacts to wetlands, habitat for threatened and endangered species and other environmental and aesthetic resources.

WRAB Discussion Included:

- Clarifying questions on FEMA reimbursement rules and how this affects immediate flood recovery projects.
- Clarification on the scope and duration of FEMA audits on the drainage way recovery projects.
- Questions regarding resources available to residents to report issues and find information.
- Discussion on what would be required for Boulder to elevate itself from Class 5 to Class 4 in the community flood insurance program.
- Discussion of potential changes in how FEMA conducts flood reimbursements and flood insurance programs.
- Questions about how the drainage way system is handling the thunderstorms that Boulder has been having this season.
- Discussion of the role that Greenways paths and underpasses play in flood control.

No Board action was requested at this time.

Agenda Item 5 –

[7:51 p.m.]

Public Hearing and Consideration of Motions to Recommend Adoption of Floodplain Mapping Revisions for Lower Bear Canyon Creek and Upper Boulder Slough.

Jeff Arthur, Bob Harberg and Katie Knapp presented the item.

Executive Summary from the Packet Materials:

The city has a comprehensive floodplain management program designed to identify flood risks, mitigate the risks of flooding, minimize loss of life and property damage and support recovery following a major flood event. Floodplain mapping provides the basis for the city's floodplain management program by identifying the areas at the highest risk for flooding. Changes in land use, updated topographic mapping and upgrades to hydrologic and hydraulic models warrant periodic mapping updates. This memorandum presents two proposed floodplain mapping revisions:

Public Comment:

- **Rick Mahan:** Severe damage from the September event. Water from his property traveled down and contributed to issues further downstream. The structures remaining in the flood zone really need to be removed, and soon.
- **Don Prince:** Potential loss of life resulting from bottle necks under bridges. Is there any chance to increase the size of the wall where the Boulder Slough starts?

WRAB Discussion Included:

- Clarifications regarding the new High Hazard designations in the studied revisions.
- Questions about how the flood event of September 2013 may have changed the topography and hence the mapping.
- Discussion of how the assumptions that the studies are based on can be provided to the public and how the City's confidence in the data provided is established.
- Discussion of reasons behind the significant changes to the mapping for the Boulder Slough.
- Discussion regarding how the ditches relate to floodplains, regulations etc.

Motion: Motion to recommend that City Council adopt the Lower Bear Canyon Creek floodplain mapping revision.

Motion by: Squillace; Seconded: Johnson

Vote: 5-0

Motion: Motion to recommend that the City Council adopt the Upper Boulder Slough floodplain mapping revision.

Motion by: Johnson; Seconded: Squillace

Vote: 5-0

Agenda Item 6 –

[8:30 p.m.]

Information Item – Update on South Boulder Creek Floodplain Mitigation Study.

Jeff Arthur and Kurt Bauer presented the item.

Executive Summary from the Packet Materials:

The purpose of this memorandum is to provide a general summary of the history and progress made to date on the South Boulder Creek flood mitigation planning study. This mitigation plan was initiated in 2010 after the floodplain mapping was updated in 2007. Since the study was initiated, multiple flood mitigation alternatives have been evaluated to address flooding associated with South Boulder Creek. A consultant recommendation has been developed and is described in this memorandum. A more detailed description of the recommended alternative will be presented and a request for a motion from the WRAB will be made

at a meeting scheduled on August 18. Attachment A shows the location of the study area.

Hydraulic modeling indicates that a major storm event will cause water from South Boulder Creek to overtop US36 near Table Mesa Drive and result in flooding through the West Valley (area generally located west of South Boulder Creek, north of US36, east of Foothills Parkway and south of Arapahoe Avenue). The September 2013 flood event did overtop US36, causing an estimated \$45 million in flood damage. A flood mitigation planning study began in early 2010 with a focus on developing and evaluating alternatives designed to mitigate flood hazards affecting structures and areas along South Boulder Creek and the West Valley within the current incorporated city limits.

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Four of the nine Best Alternative Plans were further refined and analyzed and the consultant team selected an engineering recommendation. Major components of the consultant recommended alternative include construction of a regional stormwater detention facility south of US36, a smaller detention facility at Manhattan Middle School and one at Flatirons Golf Course.

The recommended alternative would provide significant flood protection within the West Valley area, including eliminating the 100-year floodplain designation that currently affects approximately 700 structures. The estimated cost of the alternative is approximately \$46 million, but the project could be constructed in three phases. Construction of the project would require numerous permits, agreements with the University of Colorado and Boulder Valley School District, disposal of Open Space and Mountain Park land and would be regulated by the State as a high hazard dam. Construction of the regional detention facility at US36 would result in significant impacts to wetlands, habitat for threatened and endangered species and other environmental and aesthetic resources.

WRAB Discussion Included:

- Discussion on how the current alternatives were developed and selected, as well as why other alternatives were not selected.
- Clarification regarding cost/benefit analysis to proposed options (including environmental impacts)
- Discussion on whether it makes sense to have a “preferred” alternative at this time in light of NEPA requirements for multiple alternatives and the widely divergent costs of the various options.
- Clarification regarding the reason for a HWY 93 Detention option. Out of City limits and City unwilling to pursue an eminent domain option.
- What it means to have a structure regulated as a High Hazard Dam.
- How the detention basins would function in an event such as the September 2013 flood, which differed from the “design storm”.
- Discussion of the benefit/cost ratios for each of the alternatives.
- Discussion of how likely it is that the alternatives that affect endangered species would be approved.
- Questions as to whether there is a more modest alternative than the large detention ponds which would be less costly and have less impact on habitat.
- Request for a summarization of the 15 options which were originally presented to WRAB so that current board members can understand the background and development of the current options.

No Board action was requested at this time.

Agenda Item 7 – Matters

[9:04 p.m.]

From the Board:

Board member Clancy brought up the below matter(s):

- Concerned about the size of the Wastewater Treatment Plant. Has gone to the EPA to check on wet weather capacity. Interested in knowing what system infiltration rates are and whether they are reasonable.

From Staff: <ul style="list-style-type: none"> • Flood Briefing: to Council tomorrow night. • Follow-up on public outreach regarding proposed rate increases • Barker Pipeline US Forest Service permitting agreement going to Council as a consent item tomorrow night. • Water Treatment: Equipment issues at both plants have resulted in some difficulties treating water at 63rd, and reduction to a single point of failure system at Betasso water treatment facility. 	[9:07 p.m.]
Agenda Item 8 – Future Schedule South Boulder Creek in August. Flood studies in coming months.	[8:55 p.m.]
Adjournment There being no further business to come before the Board at this time, by motion regularly adopted, the meeting was adjourned at 9:14 p.m. Motion to adjourn by: Squillace; Seconded by: Johnson Motion Passes 5:0	[9:14 p.m.]
Date, Time, and Location of Next Meeting: The next WRAB meeting will be Monday, 18 August 2014 at 7:00 p.m., in the Council Chambers, 1777 Broadway, 80302.	

APPROVED BY:

ATTESTED BY:

Board Chair

Board Secretary

Date

Date

An audio recording of the full meeting for which these minutes are a summary, is available on the Water Resources Advisory Board web page.